

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
BLANCHE et al.	Group Art Unit: 1652
Application No.: 10/724,598	) Examiner: K. Kerr (Prior Appln.)
Filed: December 1, 2003	Confirmation No.: 8180
For: METHODS OF INCREASING THE PRO	) DDUCTION

OF COBALAMINS USING COB GENE EXPRESSION (As Amended)

MAIL STOP AMENDMENT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

# REQUEST FOR CORRECTED FILING RECEIPT

We are forwarding a copy of a Filing Receipt for this application. The information under Domestic Priority data as claimed by applicant contained a typographical error. Therefore, under Domestic Priority data as claimed by applicant, please delete "which is a CON of 07/916,451 07/17/1992 ABN" and insert the following:

> which is a CON of 07/916,151 09/14/1992 ABN which is a national stage of PCT/FR91/00054 01/30/1991 ABN --

Application No. 08/426,630, which is a continuation of Appln. No. 07/916,151, issued as U.S. Patent No. 6,656,709 B1. The attached copy of the face page of the '709 patent correctly identifies that it is a continuation of Appln. No. 07/916,151. The '709 patent also correctly indicates that 07/916,151 was filed as PCT/FR91/00054, and

Application No.: 10/724,598

is therefore a national stage application. The 35 U.S.C. § 371 date of Appln. No. 07/916,151 is September 14, 1992.

It is respectfully requested that a corrected Filing Receipt be issued as soon as possible.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

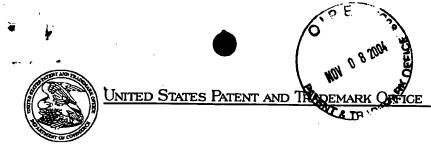
Dated: November 8, 2004

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FILING OR 371 ART UNIT **FIL FEE REC'D** ATTY.DOCKET NO (c) DATE DRAWINGS TOT CLMS IND CLMS 10/724,598 12/01/2003 1652 0.00 03806-0050-02000 189 57

**CONFIRMATION NO. 8180** 

22852 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER 1300 I STREET, NW

\*OC000000013487162\*

FILING RECEIPT

AUG 1 1 2004

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP

Date Mailed: 08/09/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

WASHINGTON, DC 20005

Francis Blanche, Paris, FRANCE: Beatrice Cameron, Paris, FRANCE; Joel Crouzet, Paris, FRANCE; Laurent Debussche, Paris, FRANCE; Sophie Levy Schil, Paris, FRANCE: Denis Thibaut, Paris, FRANCE;

Assignment For Published Patent Application

Aventis Pharma S.A.:

Domestic Priority data as claimed by applicant

This application is a CON of 08/426,630 04/21/1995 PAT 6,656,709

-which is a CON of 07/916,451-07/17/1992-ABN \*

(\*)Data provided by applicant is not consistent with PTO records.

Foreign Applications

FRANCE 90 01137 01/31/1990 which is a national stage of

PCT | FR 91 | 00054 01 | 30/91 ABN

Oreign Filing License Granted: 08/00/2004

If Required, Foreign Filing License Granted: 08/09/2004

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Methods of increasing the production of cobalamins using cob gene expression

**Preliminary Class** 

435

# LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15

#### **GRANTED**

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### **NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



# (12) United States Patent

Blanche et al.

(10) Patent No.:

US 6,656,709 B1

(45) Date of Patent:

Dec. 2, 2003

#### METHODS OF INCREASING THE PRODUCTION OF COBALAMINS USING COB GENE EXPRESSION

(75) Inventors: Francis Blanche, Paris (FR); Beatrice Cameron, Paris (FR); Joel Crouzet,

Paris (FR); Laurent Debussche, Paris (FR); Sophie Levy Schil, Paris (FR); Denis Thibaut, Paris (FR)

(73) Assignee: Rhone-Poulenc Biochimie, et al.,

Antony (FR)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

(21) Appl. No.: 08/426,630

(22)Filed: Apr. 21, 1995

#### Related U.S. Application Data

Continuation of application No. 07/916,151, filed as application No. PCT/FR91/00054 on Jan. 30, 1991, now aban-

(30)Foreign Application Priority Data

Jan.	. 31, 1990 (FR)	90 01137
(51)	Int. Cl.7	C12P 19/42
(52)	U.S. Cl	435/86
(58)	Field of Searc	h 536/232, 23.7;
	4	35/320.1, 240.2, 252.3, 69.1, 86, 232

#### (56)References Cited

#### U.S. PATENT DOCUMENTS

3,018,225 A \* 1/1962 Long ....... 435/86

#### FOREIGN PATENT DOCUMENTS

wo WO A 8701391 12/1987

#### OTHER PUBLICATIONS

Sasarman, Rev. Can. Biol. Exp. 42(3): 308-309 (1983).\* Brey et al., J. Bacteriol. 167: 623-630 (1986).\* Crouzet et al., J. Bacteriol. 172: 5968-5979 (Oct. 1990).\* Crouzet et al., J. Bacteriol. 172: 5980-5990 (Oct. 1990).\* Cameron et al., J. Bacteriol, 173: 6058-6065 (1991).\* Cameron et al., J. Bacteriol. 173: 6066-6073 (1991).\* Crouzet et al., J. Bacteriol. 173: 6074-6087 (1991).\* Cameron, et al.; "Cloning and analysis of genes involved in coenzyme B12 biosynthesis in Pseudomonas denitrificans", pps. 547-557; Journal of Bacteriology, vol. 171, No. 1, Jan. 1989; American Society for Microbiology (Washington,

Blanche, et al.; "Purification and characterization of S-adenosyl-L-methionine: Uroporphyrinogen III methyl-transferase from Pseudomonas denitrificans", pps. 4222-4231; Journal of Bacteriology, vol. 171, No. 8, Aug. 1989; American Society for Microbiology, (Wash. D.C.).

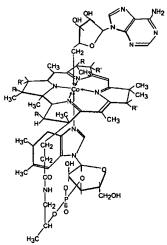
\* cited by examiner

Primary Examiner-Ponnathapu Achutamurthy Assistant Examiner-Kathleen Kerr (74) Attorney, Agent, or Firm-Finnegan, Henderson, Farabow, Garrett, & Dunner LLP

#### (57)**ABSTRACT**

Novel polypeptides involved in the biosynthesis of cobalamines and/or cobamides, in particular coenzyme B<sub>12</sub>, genetic material responsible for expressing these polypeptides, and a method for preparing them, are described. A method for amplifying the production of cobalamines, and particularly coenzyme B<sub>12</sub>, using recombinant DNA techniques, are also described.

#### 58 Claims, 189 Drawing Sheets



ADENOSYLCOBALAMIN R = CH2COHN2, R' = CH2CH2CONH2



## United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent Styl Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Viginis 22313-1450

NOV 0 8 2004

APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO./TITLE

10/724,598

12/01/2003

Francis Blanche

03806-0050-02000

**CONFIRMATION NO. 8180** 

\*OC00000013489504\*

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Date Mailed: 08/09/2004

# Notice Regarding Benefit/Priority Claim(s)

# Improper Benefit Claim(s) to Prior-Filed Nonprovisional Application(s)

The benefit claim(s) to prior-filed nonprovisional application(s) is improper because there is no specific reference for each prior-filed application that includes: (1) the identification of the prior-filed application by application number, or international application number and international filing date; and (2) a clear indication the <u>relationship</u> (i.e., continuation, divisional, or continuation-in-part) of the nonprovisional applications. For example, applicant should amend the specification to include a specific reference, such as "This application is a continuation of Application No. 10/---,--- filed ---." in the first sentence of the specification following the title.

Applicant should review each benefit claim submitted and, if appropriate, provide the proper reference to the prior-filed application(s) as required by 37 CFR 1.78. A proper relationship includes an identification of each nonprovisional application as a continuation, divisional or continuation-in-part application of the immediate prior-filed nonprovisional application for which a benefit is claimed under 37 CFR 1.78 in order to establish copendency throughout the entire chain of prior-filed applications. The specific reference must be included in the domestic priority information section of an application data sheet (37 CFR 1.76), or the specification must contain, or be amended to contain, such reference in the first sentence following the title.

Timeliness: The required reference for each benefit claim must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78(a), the surcharge set forth in 37 CFR 1.17(t), and the required reference are filed. See 37 CFR 1.78(a).

# Improper Benefit Claim(s) to Prior-Filed Nonprovisional Application(s)

The benefit claim(s) to prior-filed provisional application(s) is improper because the instant application was not filed within twelve (12) months from the filing date of the provisional application,

and there is no indication of an <u>intermediate nonprovisional application</u> that is directly claiming the benefit of the provisional application and filed within 12 months of the filing date of the provisional application. For example, applicant should amend the specification to include a specific reference, such as "This application is a continuation of Application No. 10/---,— filed ---, which claims the benefit of U.S. Provisional Application No. 60/---,— filed----." in the first sentence of the specification following the title.

Applicant should review each benefit claim submitted and, if appropriate, provide the proper reference to the prior-filed applications (including an indication of any intermediate nonprovisional application that is directly claiming the benefit of the provisional application and filed with 12 months of the filing date of the provisional application) as required by 37 CFR 1.78. The required reference must be included in the domestic priority information section of an application data sheet (37 CFR 1.76), or the specification must contain, or be amended to contain, such reference in the first sentence following the title.

Timeliness: The required reference for each benefit claim must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78(a), the surcharge set forth in 37 CFR 1.17(t), and the required reference are filed during the pendency of the instant application.

## ☐ Improper Priority Claim(s) to Prior-Filed Foreign Application(s)

The instant application was not filed within twelve (12) months from the filing date of the prior-filed foreign application, and there is no benefit claim to an intermediate nonprovisional application filed within 12 months of the filing date of the foreign application. Applicant should review each priority claim submitted and, if appropriate, provide the proper reference to any intermediate nonprovisional application filed within 12 months of the filing date of the foreign application in compliance with 37 CFR 1.78, or delete the priority claim. The required reference to an intermediate nonprovisional application must be included in the domestic priority information section of an application data sheet (37 CFR 1.76), or the specification must contain, or be amended to contain, such reference in the first sentence following the title.

Timeliness: The required reference for the benefit claim to an intermediate nonprovisional application must be filed during the pendency of the instant application and within the later of: (1) four months from the actual filing date of the instant application, or the national stage commencement date if the instant application is a national stage application under 35 U.S.C. 371; or (2) sixteen months from the filing date of the prior-filed application. Failure to timely file the required reference is considered a waiver of any benefit claim, unless a grantable petition to accept an unintentionally delayed claim under 37 CFR 1.78(a), the surcharge set forth in 37 CFR 1.17(t), and the required reference are filed.

# ■ Benefit Claims to More Than 400 Prior-Filed Applications

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The Office's automated system to record and capture benefit claims is only capable of recording benefit claims for 400 prior-filed applications. Therefore, the Office is unable to generate a filing receipt containing benefit claims for more than 400 prior-filed applications even though applicant is entitled to submit benefit claims for more than 400 prior-filed applications. Accordingly, applicant should not request a corrected filing receipt to include benefit claims for more than 400 prior-filed applications.

U.S.C. 371) Application

Applicant submitted a benefit claim to a prior-filed nonprovisional application and improperly indicated that the prior-filed application is a national stage application under 35 U.S.C. 371. The Office's records show that the prior-filed application is an application filed under 35 U.S.C. 111(a). The Office has entered the benefit claim to the prior-filed application as a benefit claim to an application filed under 35 U.S.C. 111(a). Any request for a corrected filing receipt to include the indication that the prior-filed application is a national stage application will not be granted unless applicant supplies evidence that the prior application was in fact a national stage application. Accordingly, applicant should not submit such request without such evidence. Applicant should submit an amendment (or an application data sheet (ADS) if the benefit claim was submitted in an ADS) to delete the indication that the prior-filed application is a national stage application.

For more information and examples on benefit claims, please see <u>Claiming the Benefit of a Prior-Filed</u> <u>Application under 35 U.S.C. 119(e)</u>, 120, 121, and 365(c), 1268 <u>Off. Gaz. Pat. Office</u> 89 (March 18, 2003), which is available on the USPTO website at <a href="http://www.uspto.gov/web/offices/com/sol/og/2003/week11/patbene.htm">http://www.uspto.gov/web/offices/com/sol/og/2003/week11/patbene.htm</a>, and the Manual of Patent Examining Procedure (MPEP) §§ 201.11 and 201.14.

PART 2 - COPY TO BE RETURNED WITH RESPONSE